

Part 1 - Amendments to Claims

1. (Presently Amended) A method of capturing a negative impression of an anatomical portion of a person, comprising:

selecting a piece of impression foam having a crush characteristic of substantially constant crushing force over a predetermined range of collapse distances;

forcing the anatomical portion into the piece of impression foam to create the negative impression by collapsing the impression foam; and

collapsing the impression foam ~~to an extent which falls only~~ within the predetermined range of collapse distances within which the crushing force is substantially constant while creating the negative impression. ~~throughout the entire negative impression created.~~

2. (Presently Amended) A method as defined in claim 1, further comprising:

selecting the impression foam to have the crush characteristic in which the predetermined range of collapse distances is at least 80% of an initial thickness of the piece of non-collapsed impression foam.

3. (Canceled)

4. (Presently Amended) A method as defined in claim 3, further comprising:

selecting the piece of impression foam to have the crush characteristic in which the constant crushing force is within the range of 1.50 to 1.85 pounds per square inch.

5. (Presently Amended) A method as defined in claim 1, further comprising:

selecting the piece of impression foam to have the crush characteristic in which the constant crushing force is within the range of 1.50 to 1.85 pounds per square inch.

6. (Presently Amended) A method as defined in claim 5, further comprising:

selecting the piece of impression foam to have the crush characteristic in which the constant crushing force is approximately 1.56 pounds per square inch.

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7. (Presently Amended) A method as defined in claim 5, further comprising:

selecting the piece of impression foam to have the crush characteristic of a relative lack of structural shear force resistance to cause the impression foam to collapse into the negative impression in a form which substantially exactly complements the anatomical portion.

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8. (Presently Amended) A method as defined in claim 5, further comprising:

selecting the piece of impression foam to have the crush characteristic of a relative lack of structural shear force resistance to cause the impression foam to collapse into the negative impression in a form which is substantially free of displacement or deformation at edges of the negative impression relative to the shape of the anatomical portion.

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9. (Presently Amended) A method as defined in claim 1, further comprising:

selecting an initial thickness of the piece of non-collapsed impression foam to result in collapsing the impression foam by no more than 90% of the initial thickness at any location on the negative impression.

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10. (Presently Amended) A method as defined in claim 1, further comprising:

seating or reclining the person on the impression foam to force the anatomical portion into the piece of impression foam.

11. (Presently Amended) A method as defined in claim 10, further comprising:

forcing the anatomical portion into the piece of impression foam from weight of the person.

12. (Presently Amended) A method as defined in claim 1, used for creating a support contour for a seat cushion by which to support ~~[[a]]~~ pelvic and proximal thigh anatomical portions ~~portion~~ of the person while sitting, further comprising:

5 forcing the anatomical portions ~~portion~~ into the piece of impression foam to obtain the negative impression from ~~at least a selected portion of~~ anatomical portions ~~portion~~ which will be supported on the support contour.

13. (Presently Amended) A method as defined in claim 12, further comprising:

~~forcing the anatomical portion into the impression foam to obtain the negative impression from a full extent of the anatomical portion which will be supported on the support contour;~~

5 selecting an initial thickness of the piece of impression foam which will collapse within the predetermined range of collapse distances to obtain the negative impression ~~of the full extent~~ of the anatomical portions ~~portion~~ which will be supported on the support contour; and

10 collapsing the impression foam within the predetermined range of crush distances at every location of the negative impression ~~of the full extent~~ of the anatomical portions ~~portion~~ which will be supported on the support contour.

14.-15. (Canceled)

16. (Presently Amended) A method as defined in claim 12, ~~[[14,]]~~ further comprising:

sitting the person on the piece of impression foam to force the ~~selected portion of the~~ anatomical portions ~~portion~~ into the impression foam.

17. (Canceled)

18. (Presently Amended) A method as defined in claim 16, ~~[[17,]]~~ further comprising:

forcing ~~the selected portion of the anatomical portions~~ portion into the piece of impression foam by applying force to the person beyond the weight of the person.

5           19.   (Presently Amended) A method as defined in claim 16, further comprising:

                  moving the person through a range of movement while the person is sitting on the piece of impression foam.

                  20.   (Presently Amended) A method as defined in claim 19, used for creating a seat cushion for a wheelchair having a seat support structure for supporting the person while seated on the seat cushion.

                  21.   (Presently Amended) A method as defined in claim 20, further comprising:

                          positioning the piece of impression foam on the seat support structure of the wheelchair; and

5                   sitting the person on the piece of impression foam positioned on the seat support structure.

                  22.   (Presently Amended) A method as defined in claim 21, further comprising:

                          maneuvering the wheelchair from actions of the person sitting on the piece of impression foam on the seat support structure.

                  23.   (Presently Amended) A method as defined in claim 21, further comprising:

                          moving the person through a range of normal movement while sitting on the piece of impression foam.

                  24.   (Original) A method as defined in claim 23, further comprising:  
                          establishing the range of normal movement to encompass the types of movement performed by the person when sitting on the seat cushion during typical use of the wheelchair.

25. (Presently Amended) A method as defined in claim 21, further comprising:

collapsing the impression foam by moving the person through a range of movement to an extent that the negative impression created encompasses changes in position of the ~~selected~~ anatomical portions ~~portion~~ of the person when sitting on the seat cushion during typical use of the wheelchair.

26. (Presently Amended) A method as defined in claim 16, further comprising:

removing the person from sitting on the piece of impression foam; and using the negative impression as a mold to create a positive mold configuration of the ~~selected~~ anatomical portions; and ~~portion~~ using the positive mold configuration to create the support contour for the seat cushion.

27. (Original) A method as defined in claim 26, further comprising: further collapsing the impression foam at selected relief areas of the negative impression to create an adjusted negative impression.

28. (Presently Amended) A method as defined in claim 27, further comprising:

locating the selected relief areas to obtain further clearance from the support contour at the location of at ~~least one of~~ the ischial tuberosities, greater trochanters, and coccyx and sacrum ~~sacrum, and the perineal area~~ of the person.

29. (Original) A method as defined in claim 28, further comprising: establishing the extent of further clearance at the relief areas by the extent of further collapsing the impression foam at the relief areas.

30. (Presently Amended) A method as defined in claim 28, further comprising:

using the adjusted negative impression as a mold to create the ~~the~~ positive mold configuration of the ~~selected~~ anatomical portions. ~~portion.~~

31. (Presently Amended) A method as defined in claim 30, further comprising:

~~using the positive mold configuration to define the support contour for the selected portion of the anatomical portion to be supported by the support contour; and~~

molding the support contour of the seat cushion from the positive mold configuration.

32. (Original) A method as defined in claim 31, further comprising: molding the seat cushion from fused together resilient plastic beads.

33. (Original) A method as defined in claim 32, further comprising: fusing the resilient plastic beads together at contact points which permit spaces between the beads to establish air ventilation permeability within the seat cushion.

34. (Never Presented)

35. (Presently Amended) A method for creating a support contour for a seat cushion by which to support pelvic and proximal thigh anatomical portions of the person while sitting, as defined in claim 28, further comprising:

selecting impression foam having a crush characteristic of substantially constant crushing force over a predetermined range of collapse distances;

sitting the person on the impression foam to force the anatomical portions which will be supported on the support contour into the impression foam to create a negative impression by collapsing the impression foam to an extent which falls within the predetermined range of crush distances at every location of the negative impression contacted by the anatomical portions which will be supported on the support contour;

removing the person from sitting on the impression foam after collapsing the impression foam;

- 15                    further collapsing the impression foam at selected relief areas of the  
negative impression to create an adjusted negative impression;  
locating the selected relief areas to obtain further clearance from the  
support contour at the location of at least one of the ischial tuberosities, greater  
trochanters, coccyx and sacrum, and the perineal area of the person;
- 20                    using the negative impression as a mold to create a positive mold  
configuration of the anatomical portions; and  
                     removing material from the positive mold configuration at selected  
support areas to create an adjusted positive mold configuration.
36.    (Original) A method as defined in claim 35, further comprising:  
                                 locating the selected support areas to obtain further protuberance  
from the support contour at the location of at least one of the lateral posterior  
buttocks or the proximal thighs of the person.
37.    (Original) A method as defined in claim 36, further comprising:  
                                 establishing the extent of further protuberance at the support areas by  
the extent of removing material from the positive mold at the support areas.
38.    (Presently Amended) A method as defined in claim 36, further  
comprising:  
                                 using the adjusted positive mold configuration mold to define the  
support contour for the selected portion of the anatomical ~~portions~~ portion to be  
5                    supported by the support contour; and  
                                 molding the support contour of the seat cushion from the adjusted  
positive mold configuration.
39.    (Original) A method as defined in claim 38, further comprising:  
                                 molding the seat cushion from fused together resilient plastic beads.
40.    (Original) A method as defined in claim 39, further comprising:  
                                 fusing the resilient plastic beads together at contact points which  
permit spaces between the beads to establish air ventilation permeability within the  
seat cushion.

41. (Presently Amended) A method for creating a support contour for a seat cushion by which to support pelvic and proximal thigh anatomical portions of the person while sitting, as defined in claim 26, further comprising:

5       selecting impression foam having a crush characteristic of substantially constant crushing force over a predetermined range of collapse distances;

10       sitting the person on the impression foam to force the anatomical portions which will be supported on the support contour into the impression foam to create a negative impression by collapsing the impression foam to an extent which falls within the predetermined range of crush distances at every location of the negative impression contacted by the anatomical portions which will be supported on the support contour;

15       removing the person from sitting on the impression foam after collapsing the impression foam;

using the negative impression as a mold to create a positive mold configuration of the anatomical portions; and

      removing material from the positive mold configuration at selected support areas which will be part of the support contour to create an adjusted positive mold configuration.

42. (Original) A method as defined in claim 41, further comprising:

      locating the selected support areas to obtain further protuberance from the support contour at the location of at least one of the lateral posterior buttocks or the proximal thighs of the person.

43. (Original) A method as defined in claim 42, further comprising:

      establishing the extent of further protuberance at the support areas by the extent of removing material from the positive mold at the support areas.

44. (Presently Amended) A method as defined in claim 42, further comprising:



using the adjusted positive mold configuration mold to define the support contour for the ~~selected portion of the anatomical portions~~ portion to be supported by the support contour; and

molding the support contour of the seat cushion from the positive mold configuration.

45. (Original) A method as defined in claim 44, further comprising:  
molding the seat cushion from fused together resilient plastic beads.

46. (Original) A method as defined in claim 45, further comprising:  
fusing the resilient plastic beads together at contact points which permit spaces between the beads to establish air ventilation permeability within the seat cushion.

47. (Presently Amended) A method as defined in claim 26, further comprising:

~~using a selected portion of the positive mold configuration to define the support contour for the selected portion of the anatomical portions portion to be supported by the support contour; and~~

molding the support contour of the seat cushion from the ~~selected portion of the~~ positive mold configuration.

48. (Original) A method as defined in claim 47, further comprising:  
molding the seat cushion from fused together resilient plastic beads.

49. (Original) A method as defined in claim 48, further comprising:  
fusing the resilient plastic beads together at contact points which permit spaces between the beads to establish air ventilation permeability within the seat cushion.

50. (Presently Amended) A method as defined in claim 16, used for creating a seat cushion for a wheelchair having a support contour for supporting the cushion, further comprising:

positioning the piece of impression foam on the seat support structure of the wheelchair; and

sitting the person on the piece of impression foam positioned on the seat support structure.

51. (Presently Amended) A method as defined in claim 16, used for creating a seat cushion for a wheelchair having a shell seat for supporting the cushion and the person within the shell seat, further comprising:

positioning the piece of impression foam in the shell seat; and

5 sitting the person on the piece of impression foam positioned in the shell seat.

52. (Presently Amended) A method as defined in claim 16, used for creating a seat cushion for a wheelchair having support contour for supporting the cushion, further comprising:

positioning the piece of impression foam on a seating simulator; and

5 sitting the person on the piece of impression foam positioned on the seating simulator.

53. (Presently Amended) A method as defined in claim 16, ~~[[49;]]~~ used for creating a seat cushion for a wheelchair having a support contour for supporting the cushion, further comprising:

5 positioning the piece of impression foam within a container to protect the impression foam from inadvertent collapse;

transporting the piece of impression foam within the container to the location of the person;

obtaining the negative impression from the person in the piece of impression foam at the location of the person;

10 transporting the piece of impression foam containing the negative impression within the container to a fabrication location which is substantially remote from the person; and

fabricating the seat cushion at the fabrication location with at least a portion of the support contour derived from a mold obtained from ~~at least a portion~~  
15 of the negative impression.

54. (Presently Amended) A method as defined in claim 53, further comprising:

protecting the negative impression created in the piece of impression foam from inadvertent collapse while transporting the piece of impression foam

5 containing the negative impression from the location of the person to the fabrication location.

55. (Presently Amended) A method as defined in claim 54, further comprising:

transporting by mail the piece of impression foam containing the negative impression from the location of the person to the fabrication location.

56. (Presently Amended) A method as defined in claim 1, further comprising:

positioning the piece of impression foam within a container having sides which surround the impression foam at locations other than which the  
5 negative impression is formed.

57. (Canceled)

58. (Presently Amended) A method of fabricating a seat cushion having a support contour for supporting a person at ~~[[a]]~~ pelvic and proximal thigh anatomical portions ~~portion~~ of the person, comprising:

5 capturing a negative impression of the ~~[[a]]~~ pelvic and proximal thigh anatomical portions; ~~portion~~;

creating a positive mold configuration of the anatomical portions ~~portion~~ using the captured negative impression; and

fusing together a plurality of resilient plastic beads into a support structure which encompasses at least a portion of the positive mold configuration to  
10 define ~~which defines~~ the support contour for the seat cushion.

59. (Original) A method as defined in claim 58, further comprising:

fusing the resilient plastic beads together at contact points which permit spaces between the beads to establish air ventilation permeability within the seat cushion.

60.-65. (Canceled)

66. (Previously Presented) A method of fabricating a cushion having a support structure for supporting a person in a wheelchair, comprising:

utilizing a matrix of resilient fused-together plastic beads as the support structure;

5                   shaping a human-interface side into the matrix of resilient fused-together plastic beads, the human-interface side defining a support contour which contacts the person; and

                  configuring another side of the matrix of resilient fused-together plastic beads to contact the wheelchair.

67. (Presently Amended) A method as defined in claim 66, further comprising:

fusing together the plastic beads into the matrix to form the support structure; and

5                   molding the plastic beads of the matrix ~~of plastic beads~~ into the human-interface side simultaneously with fusing together the plastic beads into the matrix.

68. (Previously Presented) A method as defined in claim 67, further comprising:

utilizing plastic beads having different resilient characteristics in different portions of the support structure when fusing together the matrix of plastic beads to form the support structure.

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69. (Previously Presented) A method as defined in claim 68, further comprising:

                  locating plastic beads having relatively greater resilient characteristics in a portion of the support structure adjacent to the human-interface side; and

5                    locating plastic beads having relatively lesser resilient characteristics  
in a portion of the support structure adjacent to the wheelchair-interface side.

70.    (Presently Amended) A method of creating a cushion for a wheelchair  
having a support structure defining a support contour for supporting a person in the  
wheelchair, comprising:

                         transporting a piece of impression foam to a location of the person;

5                    positioning the piece of impression foam in a container to protect the  
impression foam from inadvertent collapse while transporting the impression foam  
to the location of the person;

                         exposing the piece of impression foam for collapse at the location of  
the person;

10                   contacting the exposed impression foam with an anatomical portion of  
the person to collapse a portion of the piece of impression foam into a negative  
impression of the anatomical portion;

                         transporting the piece of impression foam containing the negative  
impression from the location of the person to a fabrication location which is

15                   substantially removed from the location of the person;

                         protecting the negative impression from inadvertent deformation while  
transporting the piece of impression foam containing the negative impression from  
the location of the person to the fabrication location;

                         fabricating the support structure at the fabrication location;

20                   forming the support contour into the support structure when  
fabricating the support structure; and

                         deriving a portion of the support contour formed into the support  
structure from the ~~impression foam containing the~~ negative impression within the  
piece of impression foam.

71.    (Presently Amended) A method as defined in claim 70, further  
comprising:

placing the piece of impression foam containing the negative impression within a container to protect the negative impression from inadvertent deformation while transporting the piece of impression foam containing the negative impression from the location of the person to the fabrication location.

72. (Presently Amended) A method as defined in claim 71, further comprising:

utilizing the same container to transport the piece of impression foam to the location of the person as to transport the piece of impression foam from containing the negative impression from the location of the person to the fabrication location.

73. (Presently Amended) A method as defined in claim 72, further comprising:

obtaining the negative impression while the piece of impression foam remains in the container.

74. (Presently Amended) A method as defined in claim 72, ~~[[74,]]~~ further comprising:

transporting by mail the piece of impression foam containing the negative impression from the location of the person to the fabrication location.

75. (Presently Amended) A method as defined in claim 70, wherein the ~~person has a~~ wheelchair has ~~[[with]]~~ a seat support structure and the cushion will be used on the seat support structure of ~~[[with]]~~ the wheelchair, the method further comprising:

positioning the piece of impression foam on the seat support structure of the wheelchair; ~~[[and]]~~

obtaining the negative impression by contacting the anatomical portion of the person with the impression foam while the piece of impression foam is positioned on the seat support structure; and ~~structure~~

10                    contacting the anatomical portion with the piece of impression foam in a manner similar to the interaction of that anatomical portion of the person with the cushion when the wheelchair is used, ~~with the cushion.~~

76.    (Presently Amended) A method as defined in claim 75, further comprising:

                         moving the person through a range of movement while the person is contacting the piece of impression foam to create the negative impression.

77.    (Previously Presented) A method as defined in claim 76, further comprising:

                         establishing the range of normal movement to encompass the types of movement performed by the person when sitting on the cushion during typical  
5    use of the wheelchair.

78.    (New) A method as defined in claim 30, further comprising:

                         removing material from the positive mold configuration at selected support areas to create an adjusted positive mold configuration; and

                         locating the selected support areas to obtain further protuberance  
5    from the support contour at the location of the lateral posterior buttocks and the proximal thighs of the person.

79.    (New) A method as defined in claim 78, further comprising:

                         molding the support contour of the seat cushion from the adjusted positive mold configuration.

80.    (New) A method as defined in claim 79, further comprising:

                         molding the seat cushion from fused together resilient plastic beads.

81.    (New) A method as defined in claim 80, further comprising:

                         fusing the resilient plastic beads together at contact points which permit spaces between the beads to establish air ventilation permeability within the seat cushion.

82.    (New) A method is defined in claim 58, further comprising:

capturing the negative impression by forcing the anatomical portions into a piece of impression foam to create the negative impression by collapsing the impression foam, the impression foam having a crush characteristic of substantially  
5 constant crushing force over a predetermined range of collapse distances; and  
collapsing the impression foam only within the predetermined range of collapse distances within which the crushing force is constant.

83. (New) A method is defined in claim 70, further comprising:

selecting the impression foam with a crush characteristic of substantially constant crushing force over a predetermined range of collapse distances; and

5 collapsing the impression foam only within the predetermined range of collapse distances within which the crushing force is constant.